

Hand fern, *Ophioglossum palmatum*, endangered
and becoming extremely rare in Florida

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The hand fern, *Ophioglossum palmatum* L., was described by Linnaeus in 1753 from material collected in Santo Domingo, Dominican Republic. It was first discovered in Florida along the Caloosahatchee River by A. W. Chapman in 1875. It has since been found in numerous locations from Seminole and Manatee Counties south, usually near the coast and only a few feet above sea level. The habitat for this fern in Florida is almost exclusively in the detritus among the old leaf bases or "boots" of cabbage palms, *Sabal palmetto* (Walter) Loddiges ex J. A. & J. H. Schultes, growing in low, moist, shady hammocks. Clearing, drainage, fire, and collecting have eliminated the hand fern from most of its former locations so that it is now extremely rare.



Fig. 1. Hand fern, *Ophioglossum palmatum*, growing on cabbage palm
(D.P.I. neg. no. 702301) (courtesy Eve A. Hannahs)

DESCRIPTION: Roots cord-like; rhizome tuberous, globose, covered with wooly scales; leaves fleshy, pendent, long petiolate, with blade divided into usually 2-7 lanceolate lobes or sometimes entire, cuneate; leaf and petiole combined up to 40 cm long; up to 6 or rarely more erect or ascending sporophylls attached along petiole margin near base of blade, 3-5 cm long, cylindric or cylindric-conic with 2 rows of sporangia in 8-60 pairs.

DISCUSSION: The hand fern is extremely sensitive to any disturbance to its habitat, particularly fire. With drainage of many of the swamps and hammocks where this fern grows, fires are more frequent and severe. According to Small (1) "So destructive have been the fires that in many localities where comparatively few years ago the hand-fern could be gathered literally by the wagon load it is now extinct." Since those words were written, the hand fern has been extirpated from a number of additional sites. It is now found only rarely in a few sites.

Collectors are now probably an even greater threat to the hand fern than fire. As an example, when the trail through Mahogany Hammock in Everglades National Park was opened in April 1960, 3 trees in the hammock were known to bear the hand fern. By June of that year none remained (2). The few remaining populations are restricted to remote areas deep in the heart of almost inaccessible swamps and hammocks. If the hand fern is to survive in Florida, these sites must be protected from fire and the depredations of collectors.

Another serious problem is the fact that this fern is very difficult to grow in cultivation because of its specialized habitat requirements. Collected plants rarely survive for any extended period of time. Most collected plants, therefore, are doomed to die.

The hand fern, though very rare now in Florida, does occur elsewhere in tropical America. Its range extends from Florida south through the Caribbean islands and Central America to northern South America. It apparently is not particularly abundant in any of these areas. With continued land development it will become increasingly rare throughout its range.

LITERATURE CITED

1. Small, J. K. 1964 (1938). Ferns of the southeastern states. Hafner. New York. 517p.
2. Ward, D. B., Editor. 1979. Rare and endangered biota of Florida. Vol. 5. Plants. University Presses of Florida. Gainesville. 175p.